

Welcome!
Water Pollution Control
Advisory Council

Overview

- Role of the Council
 - operation
- Rulemaking
- Permitting
- Water quality standards
 - Temporary water quality standards

Water Pollution Control Advisory Council

- Council acts in **advisory capacity** to DEQ on matters relating to water pollution
- **advisory capacity** “Means furnishing advice, gathering information, making recommendations, and performing other activities that may be necessary to comply with federal funding requirements and does not mean administering a program or function or setting a policy.”

Water Pollution Control Advisory Council

- DEQ designates secretary
- Members designate deputy or alternate
- Annually:
 - Council selects presiding officer
 - Set meeting calendar

Meeting Preparation

- Agenda development
 - Council members & DEQ solicited
 - Chair & secretary finalize
- Information packages distributed to Council prior to meeting
 - Include agenda item summary sheets and copy of draft rule on rulemaking items

Meetings

- About 6/yr
- scheduled about 1 month prior to BER
- held in Helena
- Chair & secretary may decide to conference call or cancel
- DEQ can cover travel expense

Reimbursement Rates

- Vehicle Mileage: \$0.445/mile
- Airline tickets will be reimbursed-Receipt required
- Hotel rooms will be reimbursed at the federal rate of \$60.00/night + tax-Receipt required. Rates above this will require additional authorization.
- Meals will be reimbursed as follows:
 - Morning 12:01 AM to 10:00 AM--\$5.00
 - Midday 10:01 AM to 3:00 PM--\$6.00
 - Evening 3:01 to 12:00 Midnight--\$12.00

Travel Reimbursement

- A Travel Reimbursement form may be obtained from Petrina.
- Fill form out and return to Petrina or Bob.

Rulemaking process at DEQ

- Typical informal process followed
 1. Initial draft or concept
 2. Stakeholder group consulted
 3. WPCAC can be considered such a stakeholder group
 4. WPCAC plays a dual role: must be part of procedure before going to Board and may be a stakeholder earlier (example, fees for water quality discharge permits)

Formal Rulemaking Process

- Rules come before WPCAC before Board
- Board Initiation
- Publication in Administrative Register
- Public hearing process
- Response to comment
- Back to Board for adoption: adoption, amendment, rejection
- Publication in Register: effective next day

Program Elements

- Montana Pollutant Discharge Elimination System
- Montana Ground Water Pollution Control System
- Short-Term Authorizations
 - 308 Pesticides
 - 318 Turbidity
- 401 Certifications – Federal Clean Water Act

What is a Permit?

- It is a license...
 - issued by the government to a person
 - granting permission to do something which would be illegal in the absence of the permit.

(75-5-605, MCA – It is unlawful to...)

- No right to permit; is revocable for cause
- Permit is license to discharge

NPDES Delegation - 1974

The purpose of this subchapter 11, 12, 13 and 14 is to establish and implement one common system for issuing permits which is compatible with the national pollutant discharge elimination system as established by the US EPA pursuant to section 402 of the federal Clean Water Act. ARM 17.30.1301.

Basic Program
General Permit
Federal Facilities

Non-delegated
Pretreatment
Biosolids

Types of Wastewater

- Process Wastewater
- Noncontact Cooling Water
 - Thermal 316
 - Intake - 316B
- Boiler Blowdown, RO Reject, Regenerate
- Storm water
- Sewage

Permit Components

Industry-Specific Components

- Effluent Guidelines
- BPJ

Components of All Permits

Cover Page

Effluent Limitations

Technology-Based

Water Quality-Based

Monitoring Requirements

Special Conditions

Compliance Schedules

Storm Water

Special Studies, Evaluations, and
Other Requirements

Standard Conditions

Municipal-Specific Components

- Secondary
- Equivalent to Secondary

- Pretreatment
- CSOs
- Municipal Sewage Sludge

- BMPs

Effluent Limitations

- Technology-Based Effluent Limits (TBEL)

e.g. Secondary Treatment
(BOD, TSS, pH, % Removal)

- Water Quality-Based Effluent Limits (WQBEL)

e.g. Ammonia, Fecal, Nutrients, Metals,
VOCs

Technology Based Effluent Limits

"Minimum Treatment Requirements - WQA"

Federal Effluent Limit Guideline (ELGs) - Industrial

- Best Conventional Technology (BCT)
- Best Available Technology (BAT)
- New Source Performance Standards (NSPS)
 - "Zero Discharge"
- Best Professional Judgment (PBJ) CWA 402(a)(1)
 - "Case-by-Case Basis"

National Secondary Treatment Standards – POTWs

Pretreatment Standards for Existing Sources (PSES)

Pretreatment Standards for New Sources (PSNS)

Water Quality Based Effluent Limits (WQBEL)

- 40 CFR 122.44 (ARM 17.30.1344)
 - Necessary when technology based limits are not adequate to protect water quality standards, including narrative;
 - Necessary for all pollutants which may cause or have a reasonable potential to cause or contribute to excursion of a WQS
- ARM 17.30.637(2)
 - No waste that may be discharged such that either alone or in combination with other wastes, will violate or can reasonably be expected to violate, any of the standards.

Development of a WQBEL

WQS

(numeric or narrative)



Translator Mechanism



Wasteload Allocation



Permit Limit

(Daily Maximum, Average Monthly)

Example – Narrative WQBEL

Standard: *State waters must be free from substances that will create concentrations which are toxic or harmful to human, plant or aquatic life (ARM 17.30.637(1)(d))*



Permit Limit: *There shall be no acute toxicity in the effluent*



Monitoring: *Quarterly Whole Effluent Toxicity (WET) Testing*

If toxicity is confirmed; facility must conduct TRE/TIE

Mixing Zones
75-5-301(5), MCA

Smallest Practicable Size
Minimum Practicable Effect on Use
Definable Boundaries

Numeric - WQBEL

Effluent

(Q_s, C_s)
upstream

(Q_d, C_d)

CRK-A

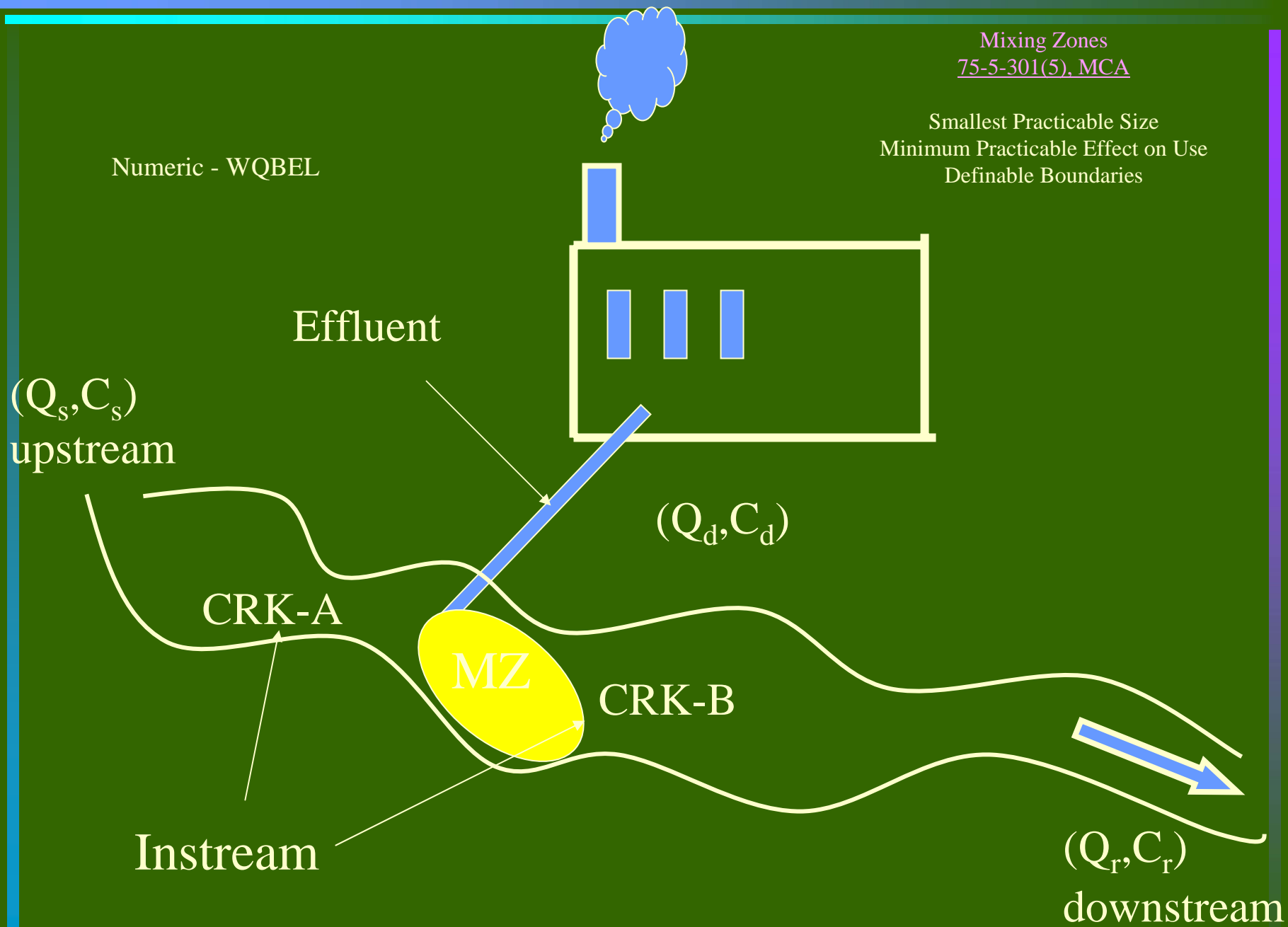
MZ

CRK-B

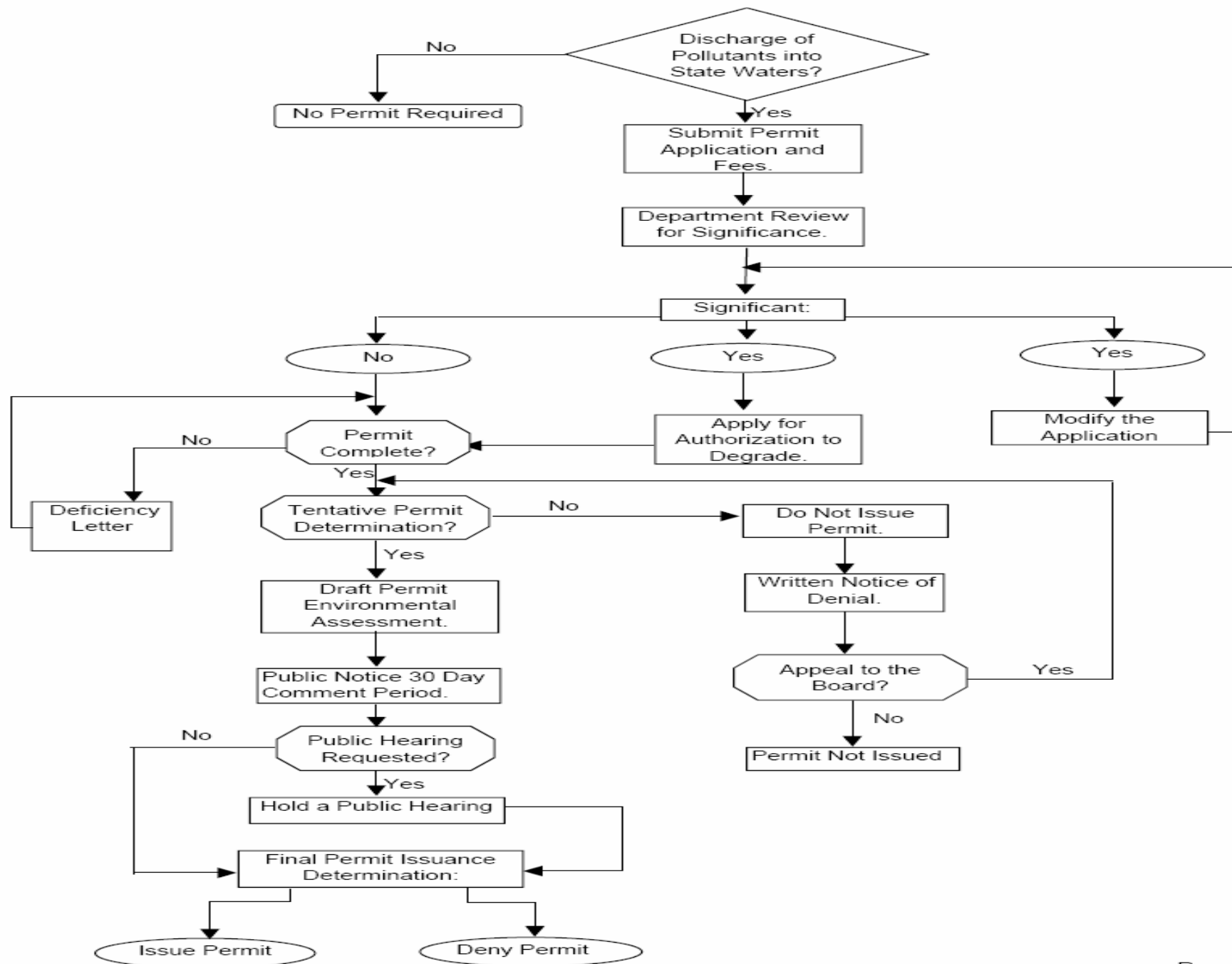
Instream

(Q_r, C_r)

downstream



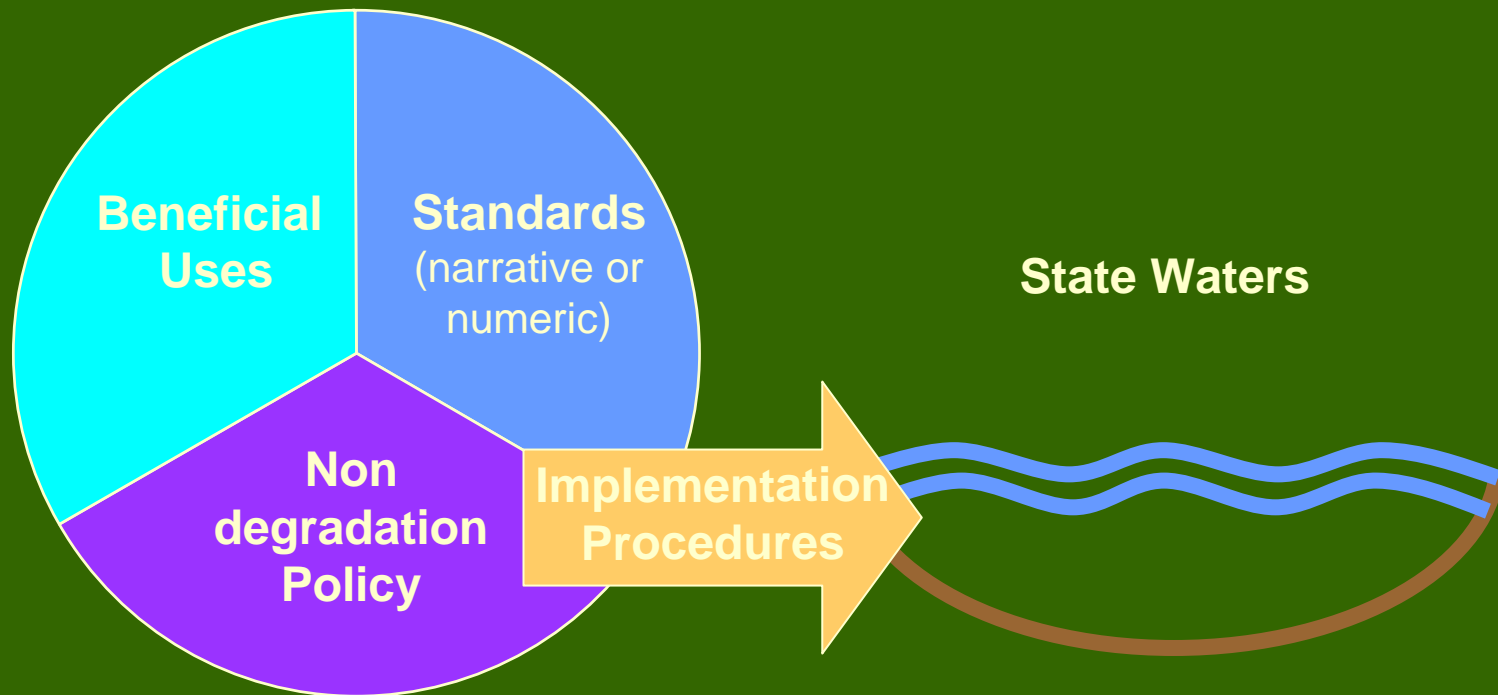
PERMITTING FLOW CHART



Federal & State roles

- Federal Clean Water Act
 - EPA
 - develops criteria for aquatic life and human health
 - Final approval authority for state standards
- Montana Water Quality Act
 - Enacted by Montana legislature
 - Provides Montana the authority to implement Federal CWA provisions
 - ARM - provides detail
 - Board of Environmental Review
 - Adopts standards after a public involvement process
 - Surface Water Quality Classifications & Standards

Water Quality Standards



Monana's Standards

- ARM 17.30 subchapter 6
- Water Use Classification
- DEQ-7 (numerics)
- Narratives

Water Quality Standard Example

- Beneficial Use: Agriculture
- Numeric standard for SAR in Tongue River during irrigation season is monthly average of 3 and no sample may exceed 4.5
- Nondegradation Policy: "Harmfull"

Nondegradation

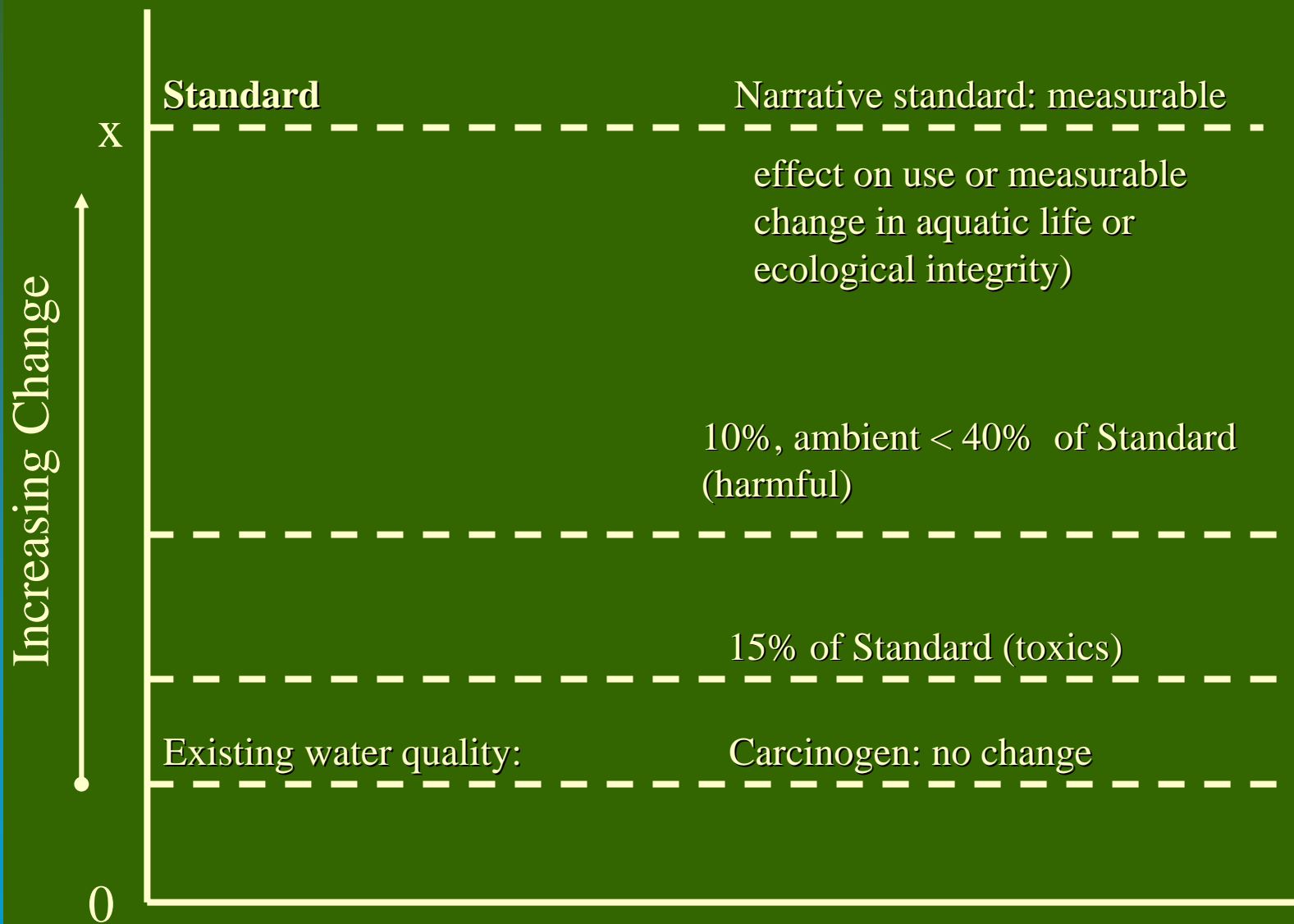
(Purpose is to protect existing water quality)

- “Outstanding Resource Waters (ORW)”
 - National Parks & Wilderness
 - Waters designated by BER
- “High Quality Waters”
 - all non-ORW waters except those not capable of supporting designated uses

Nondegradation

- Applicable to any new or increased discharge
- Significance determination
 - Carcinogens
 - Toxics
 - Harmful
 - Narrative
- If significant change to water quality, then need authorization to degrade

Significance Thresholds



Montana's Temporary Water Quality Standards (75-5-312 MCA)

- "The board may.....temporarily modify a water quality standard for a specific water...."
- "...goal is to improve water quality to the point at which all the beneficial uses....are supported."



Temporary standards

1. MT DEQ or petitioner prepare:

1. Support document

- chemical, biological, & physical condition of the water body or segment;
- specific water quality limiting factors
- water quality standards that are not being achieved
- the requested temporary modifications to water quality standards
- existing beneficial uses
- designated uses considered attainable in absence of water quality limiting factors

Temporary standards

- MT DEQ or petitioner prepare:
 1. Support document
 2. Preliminary implementation plan
 - description of proposed actions that will eliminate the water quality limiting factors identified
 - schedule for implementing the proposed actions that ensures that the existing water quality standards for the parameter or parameters at issue are met as soon as reasonably practicable.

Temporary standards

1. MT DEQ or petitioner prepare:
 - Support document
 - Preliminary implementation plan
2. BER makes decision
3. DEQ or petitioner
 - Modify implementation & schedule as directed
 - Develop detailed work plan during first field season
4. Remediation work
5. Periodic review & adjustment as necessary until:
 - Full support
 - Plan not being implemented

EXTRA Slides
Follow

SUMMARY

- Federal Clean Water Act
 - EPA - develops criteria for aquatic life and human health
 - States - designate uses and adopt standards
- Montana Water Quality Act
 - ARM - provides detail
 - Surface Water Quality Classifications & Standards
 - WQB-7 - numeric water quality standards
- Standards
 - Beneficial uses
 - Criteria to protect uses (Standards)

SUMMARY

- Standards
 - Can be numeric or narrative
 - Generally adopted from Federal 304 (a) criteria e.g. Cu, As
 - Montana may develop scientific basis, e.g. nutrients
 - Standards to protect human health may be less stringent than for aquatic life, or vice versa

The EPA Considers Montana's WQ Standards to be the:

Water Quality Act,
Administrative Rules of Montana,
Mixing Zone Rules,
Surface Water Quality Standards and
Procedures,
Non-degradation Rules, and
WQB-7

These include a mix of narrative (...to be maintained free from...) and numeric (10µg/L) "standards."

Administrative Rules of Montana (ARM)

- Puts the WQA (and other Legislation) into Action
- Title 17, Chapter 30,
 - Subchapter 5 - Mixing Zone Rules
 - Subchapter 6 - Surface Water Quality
 - Subchapter 7 - Nondegradation Rules
 - Subchapter 10 - Ground Water Pollution Control System
 - Subchapter 11- Stormwater Rules
 - Subchapters 12-13 Montana Pollutant Discharge Elimination System

Federal Clean Water Act

Set Goals and Water Quality Standards (WQS)

Conduct Monitoring

Meeting WQS?

303(d)

No

Yes

Develop Strategies and Controls (Total Maximum Daily Loads-TMDLs)

Apply Antidegradation

Implement Strategies

NPDES

Section 401

Section 319

Section 404

State Revolving Fund (SRF)



Federal Clean Water Act

THE GOALS:

- No Discharge of Pollutants
- Fishable/Swimmable

TO BE ACHIEVED BY:

- Technology Based Controls
- Water Quality Standards

Federal Clean Water Act Directs the States To:

- Designate Beneficial Uses
 - Health
 - Aquatic life
- Adopt Standards
 - provides section 304(a) criteria
 - States can develop based on sound science

What is a Water Quality Standard?

- Designated Uses
 - Human Health
 - Aquatic Life
- Criteria to protect those uses (MT Standards)
 - Numeric
 - DEQ-7
 - Narrative
- Antidegradation Policy

Water Quality Standards (*WQS*)

Specific WQS

Fecal, DO, pH, Temperature, Color &
WQB-7

General WQS (Narrative)

"Free From"

State options for setting standards to protect beneficial uses

(40 CFR 131.11)

- Numeric standards be based on:
 - 304(a) guidance
 - Published by EPA
 - Other scientifically defensible methods
- Narrative where numeric cannot be determined

Narrative Standards

Example

- ARM 17.30.637 (1): “State surface waters must be free from substances attributable to municipal, industrial, agricultural practices or other discharges that will:
(e) create conditions which produce undesirable aquatic life.

Montana Water Quality Act

- Provides DEQ authority to implement Federal Clean Water Act programs
 - Water Quality Standards
 - MPDES
- Directs DEQ to provide opportunity to WPCAC to comment on proposed rulemaking prior to first publication
- The Board of Environmental Review (BER) adopts rules and standards.